

MONTHLY WEATHER REVIEW.

(GENERAL WEATHER SERVICE OF THE UNITED STATES.)

DECEMBER, 1887.

CONTENTS.

	Page.		Page.
INTRODUCTION.....	319	ATMOSPHERIC ELECTRICITY.—Auroras; Thunder-storms; Electrical phenomena	332
ATMOSPHERIC PRESSURE.—General distribution; Comparison of barometric means with those of previous month; Departures from normal; Monthly barometric ranges; Areas of high pressure; Areas of low pressure.....	319	MISCELLANEOUS PHENOMENA.—Meteors; Migration of birds; Mirage; Prairie fires; Sand storms; Sun spots	332
NORTH ATLANTIC STORMS.—North Atlantic storms for December, 1887; Ocean ice; Fog.....	322	VERIFICATIONS.—Indications; Cautionary signals; Cold wave signals; Local verifications	333
TEMPERATURE OF THE AIR.—General remarks; Monthly and daily ranges; Frosts; Deviations from the normal; Temperature of water; Table of comparative maximum and minimum temperatures	324	STATE WEATHER SERVICES.—Extracts from reports of the several services	334
PRECIPITATION.—General distribution; Deviations from the average; Hail; Sleet; Snow; Monthly snowfalls; Depth of unmelted snow at end of month; Excessive monthly precipitation for December, 1887, and for December of past years; Heavy rainfalls at New York City	326	NOTES AND EXTRACTS.—Ocean fog predictions; Hourly variations of atmospheric pressure	336
WINDS.—Most frequent directions; High velocities; Local storms..	330	METEOROLOGICAL TABLES.—Monthly and annual mean temperature and precipitation, 1872-'87, at New Ulm, Tex.; Monthly and annual precipitation, 1836-'57 and 1873-'86, at Fort Gibson, Ind. T.; Data from stations of the Signal Service; Data from stations of voluntary observers	337
INLAND NAVIGATION.—Ice in rivers and harbors; High tides; Low tides; Stage of water in rivers and harbors	331	SUBJECT-INDEX.—Review, October, 1872, to December, 1887 ...	341
		CHARTS.—I. Tracks of areas of low pressure; II. Isobars, isotherms, and winds; III. Normal and current temperature curves for selected stations; IV. Precipitation.	

PREPARED UNDER THE DIRECTION OF
BRIGADIER GENERAL A. W. GREELY,
CHIEF SIGNAL OFFICER OF THE ARMY,

BY H. H. C. DUNWOODY,
1ST LIEUTENANT, 4TH ARTILLERY, A. S. O. AND ASSISTANT.

PUBLISHED BY AUTHORITY OF THE SECRETARY OF WAR.

WASHINGTON CITY:
SIGNAL OFFICE.
1888.